

WHAT IS CLAIMED IS:

1. A work conveying system comprising at least a work holding means for holding a work and a horizontal moving means for moving said work holding means horizontally in an upper ceiling space within a clean room, said work being conveyed to each of plural processing apparatuses while circulating among said processing apparatuses in the clean room, wherein:

said horizontal moving means has at least one linear moving mechanism,

said linear moving mechanism comprising:

a traveling path covered with a duct and having a guide portion in the interior thereof;

a traveling body adapted to engage said guide portion and travel through an interior space of said traveling path; and

a slider connected to said traveling body and adapted to travel together with said traveling body in the exterior of said traveling path, said work holding means or another linear moving mechanism being attached to said slider,

and cleaning means are disposed at suitable intervals in said traveling path to clean the air present within the traveling path and discharge the cleaned air to the exterior.

2. A work conveying system according to claim 1, wherein a drive source, a drive mechanism, and a power supply means, which are for said traveling body, are accommodated in the interior of said traveling path, at least said drive source being integral with said traveling body.

3. A work conveying system according to claim 1 or claim 2, wherein a base member serving as a base of a guide member having said guide portion constitute a part of said duct, said guide member and said base member being formed by integral molding of the same material.

4. A work conveying system according to any of claims 1 to 3, wherein in said horizontal moving means a plurality of said linear moving mechanisms are used in combination to permit the horizontal moving means to move arbitrarily in a horizontal plane in the upper ceiling space within said clean room.

5. A work conveying system according to any of claims 1 to 4, wherein said work holding means is attached to said slider through a vertical moving means for moving said work holding means vertically.

6. A work conveying system comprising at least a work holding means for holding a work and a horizontal moving means for moving said work holding means horizontally in an upper ceiling space within a clean room, said work being

conveyed to each of plural processing apparatuses while circulating among said processing apparatuses, wherein:

said horizontal moving means has at least one linear moving mechanism,

said linear moving mechanism comprising:

a traveling path covered with a duct and having a guide portion in the interior thereof;

a traveling body adapted to engage said guide portion and travel through an interior space of said traveling path; and

a slider connected to said traveling body and adapted to travel together with said traveling body in the exterior of said traveling path, said work holding means or another linear moving mechanism being attached to said slider, and

a deformable sealing means is provided in an elongated gap portion in which a connecting member for connecting said slider to said traveling body extends through said duct and travels along said traveling path, said sealing means covering said elongated gap portion without obstructing the travel of said connecting member.

7. A traveling path sealing structure in a work conveying system, said work conveying system including at least one linear moving mechanism, said linear moving mechanism comprising:

a traveling path covered with a duct and having a guide portion in the interior thereof;

a traveling body adapted to engage said guide portion and travel through an interior space of said traveling path; and

a slider connected to said traveling body and adapted to travel together with said traveling body in the exterior of said traveling path, a work holding means or another linear moving mechanism being attached to said slider,

wherein a deformable sealing means is provided in an elongated gap portion in which a connecting member for connecting said slider to said traveling body extends through said duct and travels along said traveling path, said sealing means covering said elongated gap portion without obstructing the travel of said connecting member.

8. A traveling path sealing structure in a work conveying system according to claim 7, wherein said sealing means is an expansion member in the shape of bellows which normally extends naturally to seal said elongated gap portion.

9. A traveling path sealing structure according to claim 7, wherein said sealing means is an expansion member which normally extends by virtue of magnetism to seal said elongated gap portion.

10. A traveling path sealing structure in a work conveying

system according to claim 8 or claim 9, wherein when looking in the traveling direction of said connecting member, in front of the connecting member are provided a first seal holding member for holding said sealing means in an initially closed state and a first seal opening member for subsequently opening said sealing member while said connecting member travels through said elongated gap portion, and at the rear of said connecting member are provided a second seal opening member for holding said sealing means in an initially opened state and a second seal holding member for subsequently closing the sealing member while said connecting member travels through said elongated gap portion.

11. A traveling path sealing structure in a work conveying system according to claim 7, wherein said sealing means is constituted by a chain and normally hangs down naturally to seal said elongated gap portion.

12. A traveling path sealing structure in a work conveying system according to claim 7, wherein said sealing means comprises a pair of upper and lower elastic tubular members which press said connecting member constantly from above and below, and when said connecting member travels through said elongated gap portion, the connecting member travels while pushing aside said pair of upper and lower elastic

tubular members vertically, while after passage of the connecting member, said pair of upper and lower elastic tubular members can immediately revert to their original shape.